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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,494

01/27/2004

Paul Steven Dowdy

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07/06/2005

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EXAMINER

MULLEN, THOMAS J

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,494

Applicant(s)

DOWDY, PAUL STEVEN

Examiner

Thomas J. Mullen, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-20 is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/28/04, 11/18/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. The disclosure is objected to because of the following informalities:

paragraph 1017, last line, "aircrafts" should be --aircraft-- (note that this term is both singular and plural);

paragraph 1021, line 19, the phrase "time out" is preceded by a double quotation mark ("), but followed by only a single quotation mark (');

paragraph 1025, it appears that after "12VDC power source" (lines 1-2) should be inserted --131-- (see Fig. 1);

paragraph 1026, line 3, it appears that after "test switch" should be inserted --S5-- (see Fig. 3G); and

paragraph 1026, line 4, it appears that "R3" should be --R53-- (see Fig. 3G).

Appropriate correction is required.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because multiple reference characters have been used to designate like elements throughout the drawings, rather than consistently using the same reference character(s) for a given element in each figure where such element is shown--note, e.g., "208" in Fig. 2, and "315" in Fig. 3B, both being used for the "first timer"; "123" in Fig. 1, "210" in Fig. 2, and "PIEZO" in Fig. 3G, all being used for the "first alarm"; etc. At the very least, it is considered that the reference numeral(s) which correspond to a given element in Figs. 1-2 should likewise be provided for the same element, where shown, in Figs. 3A-3I, 4A-4B and 5. Thus, as one example, the steering sensors or sensor circuits shown in Fig. 3A (elements 307 and 309), Fig. 3D (OC1), Fig. 3F (OC2), Figs. 4A-4B (414 and 416) and Fig. 5 (no reference numeral at present) should be provided with reference numerals 113A and 113B (from Fig. 1) and/or 202 and 204 (from Fig. 2), as appropriate.

The drawings are objected to because in Fig. 1, block 120, "WHEELHOUSE" should be --WHEEL_HOUSE--.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Claim 11 is objected to under 37 CFR 1.75(a) for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11, line 2, "Optical" should be --optical--.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the relationship between the various periods of "time" recited in the claim is not clearly set forth--note: "the time between adjustments" (line 3), "the time needed to inhibit a collision after it is no longer controlled by the operator" (lines 3-4), and "a sufficient amount of time from a preceding adjustment" (lines 5-6). In particular, the phrase on lines 3-4 is indefinite as to (i) what element is being referred to as "it", and (ii) whether "the time needed to inhibit a collision" refers to the time starting from when the operator last made an adjustment and ending with an estimated time of collision, or to the time starting from when the operator (or some other person) regains control of the vehicle and thereafter tries to avoid the collision before the estimated time of collision. Further, it is unclear whether the "time" on lines 5-6 is the same duration as the "time" on line 3 (note that the term "sufficient" is used to characterize both of these "times").

In claim 5, "wherein the second alarm is provided externally to the operator" is indefinite as to the use of "externally", i.e. it is unclear what this term implies about how or whether the operator perceives the second alarm, and whether the physical placement of the alarm with

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respect to its housing or an enclosed area is being defined. In general, it appears from this phrase that the operator does receive the second alarm in some manner ("provided...to the operator"), in contrast with the language at the end of the claim (wherein the vehicle may be disabled "by an entity other than the operator").

In claim 8, line 3, "whether the (vehicle) control is adjusted" is indefinite as to whether this "adjustment" involves correction of a vehicle element prior to use of the vehicle (e.g. maintenance of an element of the vehicle's engine), or involves correction of a vehicle element during use of the vehicle (e.g. steering angle).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by any of Seko et al (US 4611199), Woods (US 4278969) or Chakiris (US 3106981).

Note in Seko et al (Figs. 1, 4 and 5, the Abstract, and col. 5, line 57 to col. 8, line 59), steering angle sensor 10, alarm controller 100 (having timer 106), and alarm 50; Seko et al teaches that a condition under which an alarm is given is that "a period of time (passes) during which no steering adjustments take place" (col. 6, lines 24-26), which "period of time" is also characterized as one which is "wholly lacking in steering adjustments, the duration of which exceeds that possible under normal alert conditions" (col. 3, lines 61-63).

Note in Woods (Figs. 1, 3 and 4, the Abstract, and col. 4, lines 25-28), steering angle sensor (30,34,36,38), steering correction delay adjust 82 (timer) having a delay adjust knob 84, and alarm 98; Woods teaches that the alarm is activated "upon the absence of a (steering wheel movement) for a predetermined time period" (Abstract, lines 13-14), which time period is set by the delay adjust knob 84.

Note in Chakiris (Figs. 1-3; col. 1, lines 10-25; col. 2, line 59 to col. 3, line 14; and col. 3, lines 58-68), steering angle sensor (L,PH1,PH2,17,18), warning "timing network" (timer)

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consisting of elements R19, R20, R23, C6 and C8 in Fig. 3 (col. 2, lines 53-55), and alarm H ("warning horn"); Chakiris teaches operating a warning signal "when steering motions cease...for a dangerous period of time" (col. 1, lines 19-22), which time period is adjustable by the variable resistor R20 (col. 3, lines 40-41).

Thus, in each of Seko et al, Woods and Chakiris, the sensor explicitly or implicitly provides a "signal" indicative of whether the steering angle ("vehicle control") is adjusted, and the timer receives the signal and activating a "first" alarm under (at least) the condition that an excessive amount of time elapses without the "control" being adjusted, as recited in claims 8-9. It is considered clearly inherent that each reference explicitly or implicitly defines each of the timing parameters recited in claim 1, i.e. "the time between (normal) adjustments (of the control)", "the time needed to inhibit a collision after (the control) is no longer controlled by the operator" and "a sufficient amount of time from a preceding adjustment", and explicitly or implicitly uses such parameters in the same manner as claimed.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-4 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Seko et al, Woods or Chakiris as set forth in paragraph 7 above, further in view of either Love (US 5012226) or Lee et al (US 5714925).

Seko et al, Woods and Chakiris fail to teach using a "second timer" and "second alarm" in the manner recited in claims 2 and 12; however, either Love or Lee et al teaches providing multiple, sequential alarms to a vehicle operator (after respective, appropriate time periods) until the operator responds to one of the alarms. See in Love, Figs. 1A-1B, 3A-3B and 4; the Abstract; and col. 5, lines 14-55. See in Lee et al, Figs. 1-2 and the Abstract. One of ordinary skill in the art viewing the system of any of Seko et al, Woods or Chakiris would have recognized that it would be advantageous to provide a second, more strenuous or urgent alarm to

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a vehicle operator, in case the operator is so incapacitated (as determined by sensing the lack of steering movements, in any of Seko et al, Woods or Chakiris) that the operator fails to acknowledge the first alarm (i.e. by turning it off, resetting it, etc.) within a short period of time. Therefore, in view of either Love or Lee et al, it would have been obvious to provide the system and method in any of Seko et al, Woods and Chakiris with a "second timer" and corresponding "second alarm", as set forth in claims 2 and 12.

As to claim 3, in any of Seko et al, Woods and Chakiris the "first" alarm is implicitly provided "to the operator of the vehicle".

As to claim 4, each of Love and Lee et al teach "disabling the first alarm" (note switch or reset button 22 in Love, and reset button 21 in Lee et al), and continuing to monitor the driver's level of alertness, "in response to a signal from the operator" (i.e. the actuation of the reset button in either reference). It would have been obvious (if not inherent) to provide the system and method in any of Seko et al, Woods and Chakiris, further in view of Love or Lee et al, with an alarm "disabling" means that is usable by the operator to acknowledge an alarm (and avoid the actuation of more strenuous alarms or other measures).

As to claim 13, in any of Seko et al, Woods and Chakiris there is inherently a "switch" (e.g., the ignition switch of the vehicle) by means of which the first timer is "disabled" upon activation of the "switch" by the vehicle operator, the first timer then remaining deactivated (at least) until the "control" (i.e. steering) is once again adjusted.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of Seko et al, Woods or Chakiris, further in view of Love, as applied to claim 4 above, and further in view of Wright (US 5090514).

Love further teaches that the alarms are provided not only to the vehicle operator but also to any "passengers", see the next-to-last sentence of the Abstract and col. 6, line 66 to col. 7, line 3. In particular, Love discloses an "on/off output" 18 (analogous to a power outlet available for use from the housing 1, see Figs. 1A-1B) which may be used for "supplying power to, for example, games usable by passengers" (see col. 6, lines 63-66), but which is "deactivated" at the time of the "second" alarm (see Fig. 3B, step S16, and col. 6, lines 29-39); such deactivation serves as notification to the "users of the games" regarding the "driver's lack of alertness" (see

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the sentence overlapping cols. 6-7). Thus, Love further teaches that the "second" alarm is "provided externally to the operator", i.e. the alarm is provided to some entity other than the operator (in this case, the other passenger(s) of the vehicle). Love doesn't explicitly teach that this other entity (i.e. the passenger(s)) is then "allowed" to "disable" the vehicle, although it is arguably inherent that any alarm perceivable by the passenger(s) would "allow" him or them (responsive to the alarm) to reach around the incapacitated operator and "disable" the vehicle themselves, in some manner; regardless, a remote means of disablement is known in the art, e.g. as taught by Wright--note "passenger" switch 22, located at the back seat 21 of the vehicle adjacent to a passenger 20, which allows the passenger to disable the vehicle by controlling the engine and brakes, and activate emergency flashers when the vehicle operator becomes incapacitated. In view of Wright it would have been obvious, in the method taught by any of Seko et al, Woods or Chakiris in view of Love, to "allow" the vehicle to be "disabled by an entity other than the operator", e.g. as taught by Wright, in order that the vehicle does not continue to travel in an out-of-control manner (due to the incapacitated operator) and thereby potentially cause an accident with other vehicles, with pedestrians and/or with stationary objects.

11. Claims 6-7 and 10-11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and/or objections under 37 CFR 1.75(a), set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 14-20 are allowed.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The art cited by applicant has been considered. Uchida et al (US 4759731) and Parr (US 5860842) each disclose watercraft-operator-condition-responsive control systems. Adams (US 5392030) discloses an analogous system for locomotives.

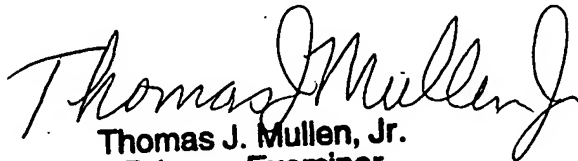
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mullen, Jr. whose telephone number is 571-272-2965. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4 PM. The examiner can also be reached on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu, can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

TJM


Thomas J. Mullen, Jr.
Primary Examiner
Art Unit 2632